

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/479, 982 01/10/00 GAUDREAU M DVS-007 (2516)

LANDIORIO & TESKA
260 BEAR HILL ROAD
WALTHAM MA 02451-1018

MM91/1102

EXAMINER

RIOS CUEVAS, R

ART UNIT PAPER NUMBER

2836

10

DATE MAILED:

11/02/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)
	09/479,982	GAUDREAU ET AL.
	Examiner	Art Unit
	Roberto J. Rios	2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 27 August 2001.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 19-31 and 33 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 19-31 and 33 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 19-31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dassonville in view of Traxler and Kamei.

As per claim 19, Dassonville teaches all the limitations except the transformer comprising a single primary winding and a plurality of secondary windings and a plurality of retriggerable drive circuits electrically connected between said secondary drive windings and said switches. However, Traxler teaches a switching circuit comprising a single pulse transformer comprising a primary winding and a plurality of secondary windings (Figure 4B; col. 8, line 48+).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to substitute Dassonville's pulse transformers by Traxler pulse transformer such that a single transformer comprises all the windings for the purpose of reducing the number of components. Furthermore, it is believed that using the single transformer embodiment would be a design choice based mostly on the switching system characteristics.

Moreover, Kamei et al (herein after Kamei) teach a drive circuit for a semiconductor switch (27) comprising a retriggerable drive circuit (26) connected between a drive circuit and said semiconductor switch.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Dassonville and Kamei such that a retriggerable drive circuits is electrically connected between each secondary winding and each switch for the purpose of reducing the power losses in the system.

As per claims 20-23, Dassonville teaches the signal comprising a pulse with two different levels (i.e. low and high).

As per claims 24, Dassonville and Traxler teach the transformer comprising a toroidal core.

As per claim 25, Dassonville teaches a stack of modulators sharing the primary of the transformer (Figure 2).

As per claim 26, Dassonville teaches the secondary windings controlling a respective switch (Figure 2).

As per claims 27 and 28, Dassonville teaches the switch comprising a thyristor or other equivalent semiconductor switch component (col. 2, line 5).

As per claims 29 and 30, Kamei teaches the retriggerable drive circuit comprising a bipolar limiting means (26). Moreover, the Examiner takes official notice that the combination of a Zener diode and a FET perform the same limiting operation as the back-to-back Zener diodes. *The Examiner wants to point out that applicant has failed to seasonably traverse the official notice taken in the last

office action mailed on 3/23/2001. If applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the next reply after the Office action in which the well-known statement was made, MPEP§ 2144.03

As per claim 31, Dassonville teaches a method of switching a signal comprising the steps of applying an input signal to a primary of a transformer; inducing a voltage in a plurality of secondary windings in response to the input signal; and switching substantially simultaneously, each of a plurality of switches that are electrically controlled by a respective one of the plurality of secondary windings, in response to the input signal. Dassonville does not specifically disclose a single transformer comprising a primary winding and a plurality of secondary windings and maintaining the switches in a substantially conducting state after termination of the input signal. However, Traxler et al (herein after Traxler) teach a switching circuit comprising a single pulse transformer comprising a primary winding and a plurality of secondary windings (Figure 4B; col. 8, line 48+).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to substitute Dassonville's pulse transformers by Traxler pulse transformer such that a single transformer comprises all the windings for the purpose of reducing the number of components. Furthermore, it

is believed that using the single transformer embodiment would be a design choice based mostly on the switching system characteristics.

Moreover, Kamei et al (herein after Kamei) teach a drive circuit for a semiconductor switch (27), wherein the switch is maintained substantially in a conducting state after termination of the input signal (col. 3, line 12).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Dassonville and Kamei such that a retriggerable drive circuits is electrically connected between each secondary winding and each switch for the purpose of reducing the power losses in the system.

As per claim 33, Dassonville teaches the step of applying a reset input signal to the single primary winding (col. 3, line 12+).

Response to Arguments

3. Applicant's arguments filed 8/27/2001 have been fully considered but they are not persuasive.

Applicant argues that Kamei does not disclose a transformer-based system, does not address transformer or inductance reflux and thus, it would not have been obvious to one skilled in the art to combine the references. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to

one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Dassonville teaches a drive circuit for a switch, wherein the switch is maintained in a conductive state as long as the input signal (SE) is present. When (SE) is terminated, the switch is placed in a non-conductive state. Kamei teaches a drive circuit for a switch, wherein by providing a retriggerable circuit (26) between the input power and the switch, said switch can be maintained in a conductive state even when said input is not present. Kamei further teaches that if appropriately selected, retriggerable circuit (26) will maintain the switch in its conductive state until an off input signal is provided (col. 5, line 9+). Kamei teaches that by providing such circuit power losses will be reduced since the on input signal does not necessarily need to be provided the whole conductive state duration. Moreover, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., transformer or inductance reflux) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, in response to applicant's arguments against the references individually (Kamei does not disclose a transformer-based system), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642

F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication with PTO

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rios whose telephone number is (703) 306-5518. In the event that Examiner Rios cannot be reached, his supervisor, Josie Ballato may be contacted at (703) 308-0269. The fax phone number for this group is (703) 305-3432.

Roberto J. Rios
Patent Examiner

Josie C. Ballato
Josie Ballato
Supervisory Patent Examiner
Technology Center 2800

11/1/01